

1 1. A method comprising:
2 providing error data to indicate motion in an image;
3 determining a characteristic of the error data; and
4 based on said characteristic, determining whether to use said error data to
5 indicate motion in an image.

1 2. The method of claim 1 including representing error data as a collection of
2 ordered bits, and coding the bits of each order to indicate zerotree roots that are
3 associated with the order.

1 3. The method of claim 1 wherein providing error data includes taking the
2 difference between two successive image representations in an image sequence.

1 4. The method of claim 3 wherein taking the difference includes taking the
2 difference of two successive discrete wavelet transform coded frames.

1 5. The method of claim 1 wherein determining a characteristic includes
2 determining whether or not the error data exceed a predetermined threshold value.

1 6. The method of claim 5 including, if the magnitude of the error data is
2 below the value, using a motion vector to indicate motion in the image.

1 7. The method of claim 5 wherein if the magnitude of the error data exceeds
2 the value, using a motion vector and the error data to indicate motion in an image.

1 8. The method of claim 5 including zerotree encoding said error data.

1 9. The method of claim 8 including zerotree encoding a representation of the
2 intensity values of pixels making up an image.

1 10. An article comprising a storage medium readable by a processor-based
2 system, the storage medium storing instructions to enable a processor to:
3 provide error data to indicate motion in an image;
4 determine a characteristic of the error data; and
5 based on said characteristic, determine whether to use said error data to
6 indicate motion in an image.

1 11. The article of claim 10, the storage medium comprising instructions to
2 enable the processor to:
3 represent error data as a collection of ordered bits and code the bits of each
4 order to indicate zerotree roots that are associated with the order.

1 12. The article of claim 10, the storage medium comprising instructions to
2 enable the processor to take the difference between two successive image representations
3 in an image sequence to develop the error data.

1 13. The article of claim 12, the storage medium comprising instructions to
2 enable the processor to take the difference of two successive discrete wavelet transform
3 coded frames.

1 14. The article of claim 10, the storage medium comprising instructions to
2 enable the processor to determine whether or not the error data exceed a predetermined
3 threshold value.

1 15. The article of claim 14, the storage medium comprising instructions to
2 enable the processor to, if the magnitude of the error data is below the value, use a
3 motion vector to indicate motion in the image.

1 16. The article of claim 14, the storage medium comprising instructions to
2 enable the processor to, if the magnitude of the error data exceeds the value, use a motion
3 vector and the error data to indicate motion in the image.

1 17. The article of claim 14, the storage medium comprising instructions to
2 enable the processor to zerotree encode said error data.

1 18. The article of claim 17, the storage medium comprising instructions to
2 enable the processor to zerotree encode a representation of the intensity values of pixels
3 making up an image.

1 19. A system comprising:
2 a subtracter to provide error data to indicate motion in an image; and
3 a device to determine a characteristic of the error data and, based on the
4 characteristic, determine whether to use the error data to indicate motion in an image.

1 20. The system of claim 19 wherein said device represents error data as a
2 collection of ordered bits, and codes the bits of each order to indicate zerotree roots that
3 are associated with the order.

1 21. The system of claim 19 wherein the subtracter takes the difference
2 between two successive image representations in an image sequence to develop error
3 data.

1 22. The system of claim 21, wherein the subtracter takes the difference of two
2 successive discrete wavelet transform coded frames.

1 23. The system of claim 19 wherein the device determines whether or not the
2 error data exceeds a predetermined threshold value.

1 24. The system of claim 23 wherein the device uses a motion vector only to
2 indicate motion in the image if the magnitude of the error is below the value.

1 25. The system of claim 23 wherein the device uses a motion vector and error
2 data to indicate motion in the image if the magnitude of the error exceeds the value.

1 26. The system of claim 23 wherein said device zerotree encodes said error
2 data.

1 27. The system of claim 26 wherein the device zerotree encodes a
2 representation of intensity values of pixels making up an image.

1 28. The system of claim 19 including arithmetic coder to code said error data.

1 29. The system of claim 19 wherein said device zerotree encodes said error
2 data and inverts the zerotree encoding of said error data.

1 30. The system of claim 19 wherein said device uses multi-resolution motion
2 estimation.

3000 2000 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000 13000 14000 15000 16000 17000 18000 19000 20000 21000 22000 23000 24000 25000 26000 27000 28000 29000 30000 31000 32000 33000 34000 35000 36000 37000 38000 39000 40000 41000 42000 43000 44000 45000 46000 47000 48000 49000 50000 51000 52000 53000 54000 55000 56000 57000 58000 59000 60000 61000 62000 63000 64000 65000 66000 67000 68000 69000 70000 71000 72000 73000 74000 75000 76000 77000 78000 79000 80000 81000 82000 83000 84000 85000 86000 87000 88000 89000 90000 91000 92000 93000 94000 95000 96000 97000 98000 99000 100000